

US EPA ARCHIVE DOCUMENT

LOCAL PLANNING FOR GREEN INFRASTRUCTURE

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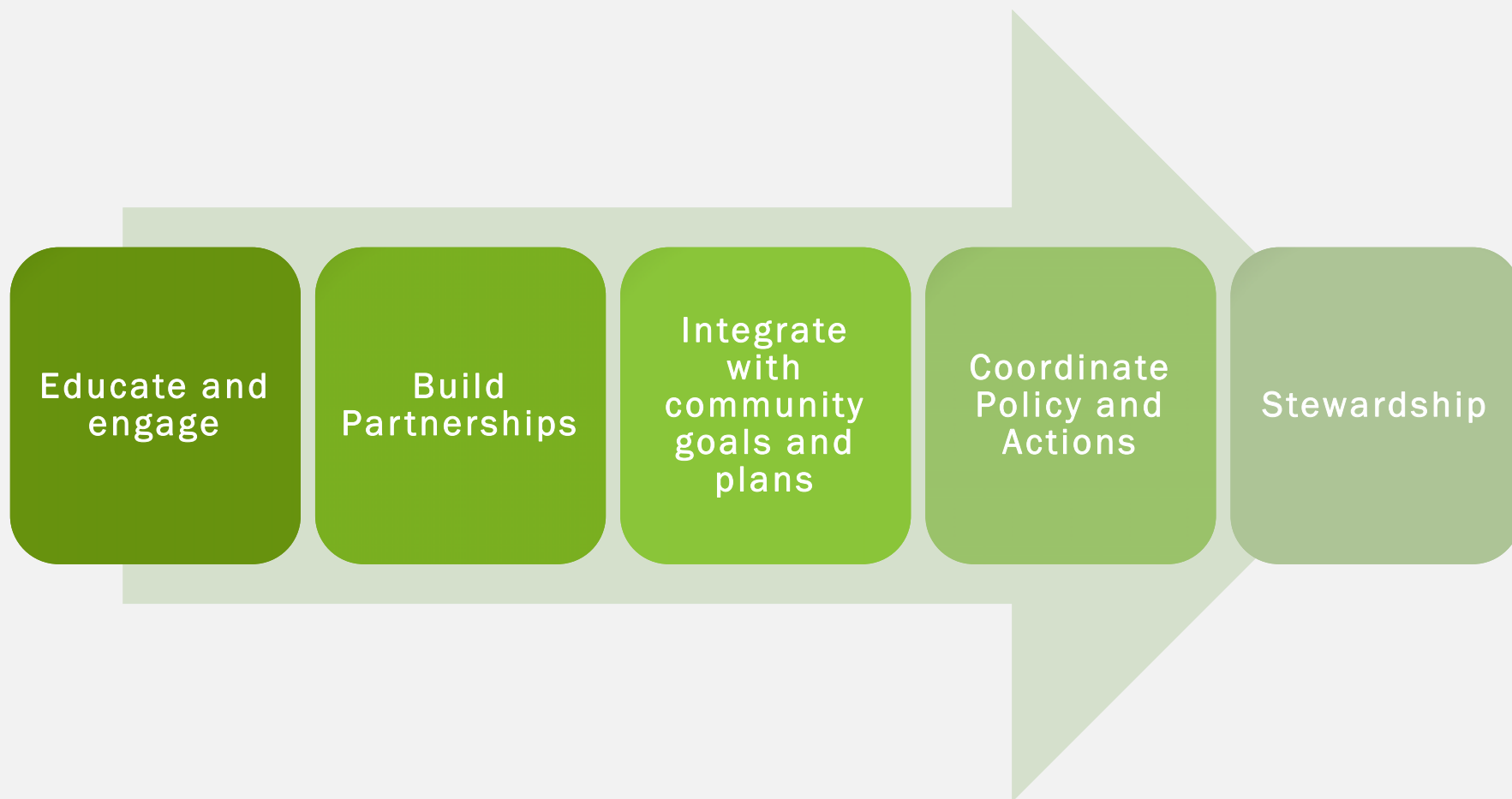
THE Louis Berger Group, INC.

New Jersey
Green
Infrastructure
Forum
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WHY PLAN FOR GREEN INFRASTRUCTURE?

- Land Use
- Stormwater management
 - Reduce peak stormwater runoff volumes and peak flows
 - Fewer CSO events
- Maintain drinking water supplies
- Lower life-cycle infrastructure costs
- Improve public and environmental health
 - Improve water & air quality
 - Mitigate urban heat island effect
 - More open/green space, recreational opportunities, and wildlife habitat
- Quality of Life

ESTABLISHING A COMMUNITY VISION



ROLE OF MUNICIPAL PLANNING

- Municipal Land Use Law

(N.J.S.A) 40:55D-1 et seq.

- Master Plan
- Capital Improvement Program
- Subdivision and Site Plan Review Ordinance
- Zoning
- Stormwater Management Plan

- Develop a Long-term green Infrastructure Plan

- Public Improvements

- Operations & Maintenance Plan or Guidelines

ROLE OF COUNTY PLANNING

- County Planning Act
(N.J.S.A.) 40:27-1 et seq.
 - Subdivision and Site Plan Review
 - Master Plan Elements
 - Review Municipal Master Plans and Stormwater Management Plans
- Water Quality Management Planning
 - Watershed and wastewater management plans
- Hazard Mitigation Plans
- Infrastructure Operations & Maintenance
- Leader & Resource for Municipalities

ACTION STEPS

Establishing a vision	Actions
Educate and Engage	<ul style="list-style-type: none"> • Seek technical assistance • Coordinate with existing community groups and schools for educational workshops
Build Partnerships	<ul style="list-style-type: none"> • Utility companies, public agencies, community groups, universities, private companies/chambers of commerce
Integrate with Community Goals and Plans	<ul style="list-style-type: none"> • Review existing plans and ordinances • Community visioning sessions • Develop a Green Infrastructure Plan • Revise existing zoning code and development review ordinances
Coordinate Policy and Actions	<ul style="list-style-type: none"> • Land use incentives for private property owners • Stormwater retention standard • Require the use of green infrastructure to reduce, or otherwise manage stormwater runoff • Require reduction of impervious surfaces • Lead by example with public facilities and pilot projects
Stewardship	<ul style="list-style-type: none"> • Ensure a long-term dedicated funding source • Engage community in maintenance

TOGETHER
**NORTH
JERSEY.**



HOBOKEN **Q.L.C.**
Quality Of Life Coalition

CASE STUDY: CITY OF HOBOKEN, NJ

Strategic
Approach to
Green
Infrastructure



GREEN INFRASTRUCTURE STRATEGIC PLAN

- Together North Jersey LDP
- Partners
- Key Issues:
 - Climate Adaptation
 - Flood Control Strategies
 - Resilience of Transit and the Surrounding Community
 - Green Infrastructure



Regional Site Map, Hoboken, NJ

COMMUNITY VISION AND LONG-RANGE PLANNING

■ Objectives:

- Develop implementable place-based stormwater management strategies in support of climate adaptation steps
- Develop a framework for green infrastructure with cost-effective, long-term solutions
- Create a more resilient transit system and transit-based community

Step 1. Analysis

*Where are
We Now?
Where Are
We
Headed?*

Step 2. Strategy

*Where do
we want to
go?*

Step 3.
Implementation

*How do we
get there?*



CASE STUDY: PASSAIC COUNTY, NJ

Complete
Streets as
Green
Streets

EXISTING GREEN INFRASTRUCTURE PROJECTS: ROADWAYS & PARKS

■ County Roads

- Infiltration Strips
- Vegetated Swales
- Contech® Units

■ County Parks

- Goffle Brook Park
Riparian Restoration

■ Open Space Trust Fund

- Park Development
- Permeable Paving projects



Greenwood Lake Turnpike, West Milford



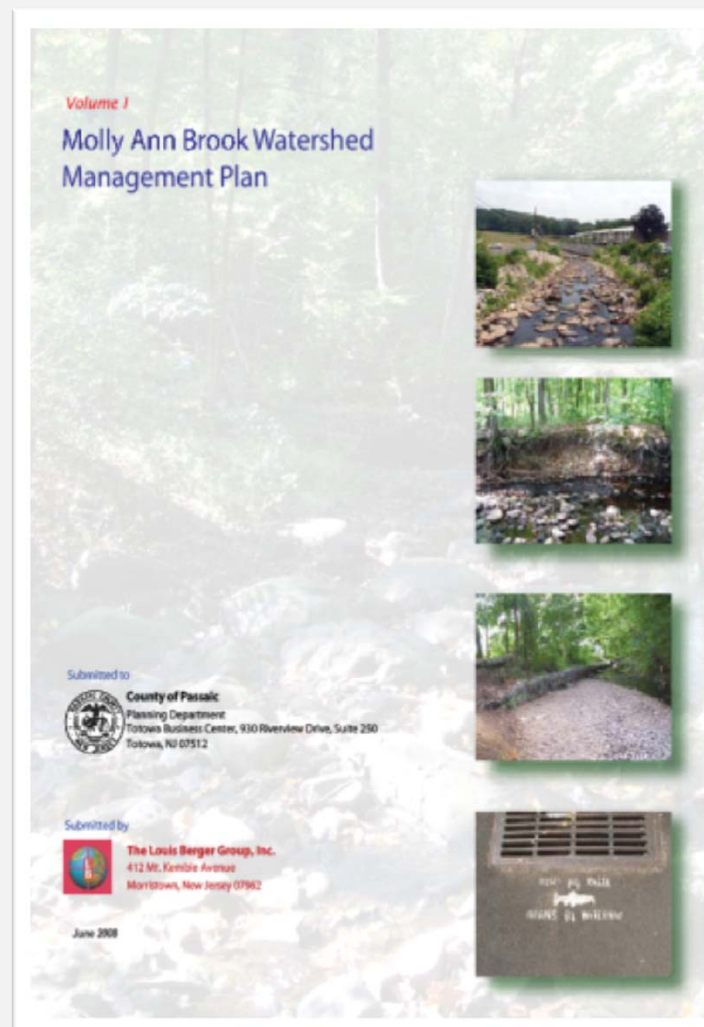
Hershfield Park, Pompton Lakes

MOLLY ANN BROOK WATERSHED MANAGEMENT PLAN



*Project Implementation Award
Recipient 2011*

- Identifies Best Management Practices (BMPs) that can reduce stormwater runoff and non-point source pollution
- 319(h) grant from NJDEP
- Goal: to enhance, protect and restore the surface water quality of the Molly Ann Brook and its tributaries



RAIN BARREL INITIATIVE

- Reduces stormwater volumes
- Harvests rainwater for nonpotable uses
- 641 rain barrels distributed →
- Prevents >2,000,000 gallons of stormwater from directly entering the watershed each year



RAIN GARDEN INITIATIVE



Recreation Pavilion, North Haledon, NJ



Fire Company #2, Haledon, NJ

- Slows rate of stormwater flows
- Collects and treats stormwater
- 7 rain gardens installed on public property in 4 municipalities
- Treat > 115,000 gallons of precipitation each year

GREEN STREETS



- *Complete Streets* = “Streets for Everyone”
- *Green Streets* = Complete Streets that incorporate low-impact design elements which can mimic natural systems

Photos courtesy of US Environmental Protection Agency

GREEN STREETS DESIGN TOOLS

■ Complete Streets Design Guidelines

■ Typical Design Elements

- Roadways
- Public transit
- On-site
- Streetscape features

■ Streetscape Features

- Plant street trees
- Utilize stormwater planters
- Increase use of pervious paving materials
- Integrate vegetated stormwater receiving areas
- Install bicycle facilities
- Energy-efficient and appropriate lighting

GREEN STREETS WORKSHOPS

- EPA Building Blocks
Technical Assistance for
Sustainable
Communities
- Education and Technical
Assistance Workshop
Series
 - Passaic County Workshop
 - City of Paterson Workshop

- Recommendations:
 - Coordination with state
and federal agencies
 - Implement Green Streets
pilot projects
 - Engage the community in
stewardship and
maintenance activities
 - Promote the benefits of
Green Streets
 - Provide model
ordinances and codes
to municipalities

IMPLEMENTATION

PLANS

Molly Ann Brook Watershed Management Plan (2008)

Moving Passaic County: Transportation Element (2012)

Passaic County Future: Sustainability Element (2013)

Amendment to *Molly Ann Brook Watershed Management Plan* (2013)

Parks, Recreation and Open Space Master Plan (forthcoming)

Hazard Mitigation Plan

PARTNERSHIPS

Rutgers Cooperative Extension

Municipalities

State, Regional and Federal Agencies

Private sector

Community, environmental and faith-based groups

School districts

Master Gardeners

Universities

REGULATIONS

Complete Streets Policy

Development Review – Complete Streets Checklist

Modify Site Plan and Subdivision regulations and County Right of Way Entry Opening Resolution (Roads Resolution)

PROJECTS

Identify Sites:

High priority areas due to flooding impacts and water quality

Rain gardens on County corridors

Green Streets pilot projects

Rain garden installers training programs

FUNDING

Passaic County Corridor Enhancement

319(h) and other grant funding sources

Public-private partnerships

Resurfacing Program

Thank you! Questions?



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